

REMARKS

Claims 1-57 are pending in this application. Claims 1-8 and 21-25 are withdrawn. Claims 13, 41, and 54 are cancelled. Therefore, claims 9-12, 14-20, and 26-40, 42-53, and 55-57 are at issue. Claims 10 and 13 are rejected under 35 U.S.C. § 112 as indefinite. Claims 9-12, 15, 16, 18, and 19 are rejected as being anticipated by Richard et al. (U.S. Publication No. 2003/0076559). Claims 20, 26-29, 31-32, 34-37, 40, 42-45, 50-53 and 55-56 are rejected as obvious over Richard et al. and Nasu et al. (U.S. Publication No. 2003/0108353). Claims 14, 17, 30, 46-49, 52-53, and 57 are rejected as obvious over Richard et al., Nasu et al., and Goodman et al. (U.S. Publication No. 2002/0154857). Applicant respectfully requests reconsideration and allowance of the pending claims in view of the remarks and amendments made herein.

35 U.S.C. § 112

Claim 10 is objected to for lack of antecedent basis for language of “the number of TO-can packaged photo detectors.” Claim 10 is amended to now recite a total number of the plurality of TO-can packaged laser sources, where TO-can packaged laser sources are previously recited in claim 9, from which claim 10 depends. Because the limitations of claim 10 now have proper antecedent basis, the § 112 rejection is now moot and should be withdrawn.

Claim 13 is cancelled and thus the § 112 rejection of claim 13 is now moot and should be withdrawn.

35 U.S.C. § 102

Applicant respectfully traverses the rejection of claims 9-12, 15, 16, 18, and 19 as anticipated by Richard et al. The claims have been amended such that each of claims 9-12, 15, 16, 18, and 19 recites, a primary TO-can packaged laser source that is positioned to transmit a first optical signal having a first wavelength along a direct line to a coupling lens, and a plurality of wavelength selective filters disposed between the primary laser source and the coupling lens along the direct line, wherein the plurality of wavelength selective filters

are adapted to pass the first optical signal while deflecting toward the coupling lens another optical signal generated by another TO-can packaged laser source.

Richard et al. does not disclose a primary TO-can packaged laser source that is positioned to transmit an optical signal along a direct line to a coupling lens nor a plurality of wavelength selective filters disposed between the primary laser source and a coupling lens, where each filter passes the first optical signal while deflecting toward the coupling lens another optical signal from another laser source. Therefore, Richard et al. does not anticipate the pending claims.

While Richard et al. discloses a plurality of optical filters along a line through an output element (168), Richard et al. does not disclose or teach a laser source positioned to transmit an optical signal along a direct line to a coupling lens. Generally, Richard et al. is directed to aligning a plurality of light sources to transmit light towards a plurality of optical filters which then selectively pass certain wavelengths of light to an output element. Each of the described embodiments of Richard et al. require at least two redirections or at least three different lines on a path towards output element 168. These two redirections include a deflection off an optical alignment element (164) and a deflection off an optical filter (166). Thus, Richard et al. does not disclose any light source that is positioned to transmit along a direct line to a coupling lens.

Moreover, Richard et al. does not teach positioning a primary laser source to transmit along a direct line to a coupling lens. In fact, Richard et al. actually teaches away from using a direct line. The entire Richard et al. disclosure is directed to using an optical alignment element (OAE) that is designed to connect or join two non-collinear light paths. (See paragraphs 0085). In particular, the OAE component of Richard et al. is a prism that operates to connect two light paths using reflectance. Thus, to operate correctly, Richard et al. requires that its light sources not be aimed directly at a target output element (otherwise reflectance cannot be used), thereby allowing its OAE to connect the light paths.

Because Richard et al. does not disclose or teach a laser source positioned to transmit an optical signal along a direct line to a coupling lens, Richard et al. does not anticipate the pending claims.

35 U.S.C. § 103

Applicant respectfully traverses the rejection of claims 20, 26-29, 31-32, 34-37, 40, 42-45, and 50-53 and 55-56 as obvious over Richard et al. and Nasu et al. The claims have been amended such that each of claims 20, 26-29, 31-32, 34-37, 40, 42-45, 50-53 and 55-56 recites a controller that receives an electrical signal(s) from a photodiode and in response to the photodiode electrical signal, changes an electric signal input to a laser source. Neither Richard et al. nor Nasu et al. discloses a controller that receives a photodiode signal and changes an electric input to a laser source in response to the photodiode signal. Therefore, no combination of Richard et al. and Nasu et al. renders the pending claims obvious.

While Richard et al. discloses measuring the output power of an optical transmitter and adjusting the physical position of an optical alignment element (or prism) Richard et al. does not disclose modifying an electric signal input to a laser source in response to a photodiode signal. Generally, the feedback circuit of Richard et al. adjusts a direction of a light beam containing an optical signal to ensure proper alignment of the light beam with an optical filter. Richard et al. does not contemplate or teach modifying an electric signal input to a light source based on a detected feedback signal (such as a photodiode signal).

While Nasu et al. discloses receiving a photodiode signal and adjusting the temperature of an optical transmitter device in response to the photodiode signal, Nasu et al. does not disclose changing an electric signal input to a laser source or light source. Generally, Nasu et al. controls transmission wavelength aberrations due to temperature changes (caused by, for example, transmitter operating heat, environmental changes, etc), by providing a temperature adjustment unit (3) that regulates the temperature of the Nasu optical transmitting device. Nasu et al. does not disclose or teach modifying an electric signal that is input to a light source and that is used to generate an optical signal. Nasu et al. only teaches modifying the operating temperature of its transmitter. Thus, while certain light characteristics (e.g., wavelength) of the Nasu optical transmitter may be affected by changing the operating temperature of the Nasu transmitter, the actual optical signal output from the Nasu light source remains the same. The pending claims, on the other hand, recite modifying an electric signal input to a light source, thereby changing the actual light characteristics of the output signal from a laser source.

Because neither Richard et al. nor Nasu et al. discloses a controller that receives a photodiode signal and changes an electric input to a laser source in response to the photodiode signal, no combination of Richard et al. nor Nasu et al. render the pending claims obvious.

Applicant respectfully traverses the rejection of claims 14, 17, 30, 46-49, 52-53, and 57 as obvious over any combination of Richard et al., Nasu et al., and Goodman et al.

First, each of claims 14 and 17 recites a primary TO-can packaged laser source that is positioned to transmit an optical signal along a direct line to a coupling lens and a plurality of wavelength selective filters disposed between the primary laser source and a coupling lens, where each filter passes the first optical signal while deflecting toward the coupling lens another optical signal from another laser source. As discussed above, Richard et al. does not disclose a primary TO-can packaged laser source that is positioned to transmit an optical signal along a direct line to a coupling lens and a plurality of wavelength selective filters disposed between the primary laser source and a coupling lens. Nasu et al. and Goodman et al. also do not disclose a primary TO-can packaged laser source that is positioned to transmit an optical signal along a direct line to a coupling lens or a plurality of wavelength selective filters disposed between the primary laser source and a coupling lens, nor is Nasu et al. or Goodman et al. cited for this purpose. Therefore, no combination of Richard et al., Nasu et al., and Goodman et al. render claims 14 and 17 obvious.

Second, each of claims 30, 46-49, 52-53, and 57 recites a controller that receives an electrical signal(s) from a photodiode and in response to the photodiode electrical signal changes an electric signal input to a laser source. As discussed above, neither Richard et al. nor Nasu et al. discloses a controller that receives a photodiode signal and changes an electric input to a laser source in response to the photodiode signal. Nasu et al. and Goodman et al. also does not disclose a controller that receives an electrical signal(s) from a photodiode and in response to the photodiode electrical signal changes an electric signal input to a laser source, nor is Nasu et al. and Goodman et al. cited for this purpose. Therefore, no combination of Richard et al., Nasu et al., and Goodman et al. render claims 30, 46-49, 52-53, and 57 obvious.

CONCLUSION

For the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejections/objections and allowance of claims 9-12, 14-20, 26-40 42-53, and 55-57.

While no fees are believed to be due with this response, the Commissioner is authorized to charge any fee deficiency required by this paper, or credit any overpayment, to Deposit Account No. 13-2855.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicant respectfully requests that the Examiner call its attorney at the number listed below.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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